Pioneer

Service Manual

ORDER NO.
RRV4163

MULTI PLAYER

CDJ-2000

THIS MANUAL IS APPLICABLE TO THE FOLLOWING MODEL(S) AND TYPE(S).

Model	Type	Power Requirement	Remarks
CDJ-2000	UXJCB2	AC 120 V	
CDJ-2000	SYXJ82	AC 220 V to 240 V	
CDJ-2000	FLXJ2	AC 110 V to 240 V	
CDJ-2000	KXJ52	AC 220 V	
CDJ-2000	AXJ52	AC 220 V to 240 V	

This service manual should be used together with the following manual(s):

Model	Order No.	Remarks
CDJ-2000/CUXJ	RRV3999	

In the service manual (RRV3999) for the CDJ-2000/CUXJ there is a note regarding the handling of mercury contained in a lamp used for the LCD backlight upon disposal of the unit. This does not apply to this product.

PIONEER CORPORATION 1-1, Shin-ogura, Saiwai-ku, Kawasaki-shi, Kanagawa 212-0031, Japan
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1. SERVICE PRECAUTIONS

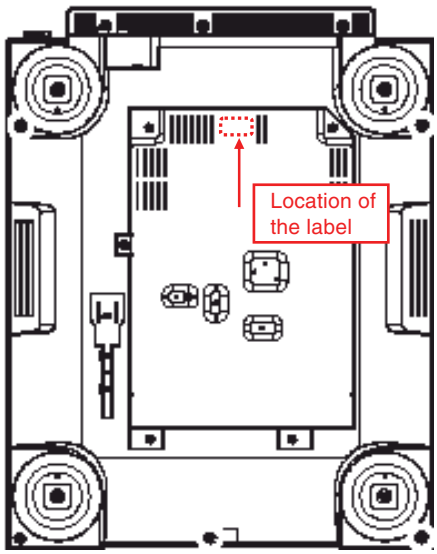
1.1 HOW TO IDENTIFY THE PRODUCT

1. From the appearance

The label shown below is attached on the bottom of this product. The location of the label is shown in the figure below.

ID label

Rear side



Front side

2. From the version indication

A dot (.) is affixed to the firmware version No. of this product.
(The version No. itself is the same as that for the base model.)

This can be confirmed with the version No. indication to be displayed during startup of the unit or in MENU/UTILITY.
Confirmation is not possible with the version indication in Service mode.

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2. CONTRAST OF MISCELLANEOUS PARTS

NOTES:
- *Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.*
- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *Screws adjacent to ▼ mark on product are used for disassembly.*
- *For the applying amount of lubricants or glue, follow the instructions in this manual. (In the case of no amount instructions, apply as you think it appropriate.)*
- *Nos. indicate the pages and Nos. in the service manual for the base model.*
- *When ordering resistors, first convert resistance values into code form as shown in the following examples.*

Ex.1 When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by J=5%, and K=10%).

560Ω	→ 56 x 10^1 →	561	RD1/4PU 5 6 1 J
47kΩ	→ 47 x 10^3 →	473	RD1/4PU 4 7 3 J
0.5Ω	→ R50		RN2H R 5 0 K
1Ω	→ 1R0		RS1P 1 R 0 K

Ex.2 When there are 3 effective digits (such as in high precision metal film resistors).

5.62kΩ	→ 562 x 10^1 →	5621	RN1/4PC 5 6 2 1 F

2.1 CONTRAST TABLE

(1) CDJ-2000 and CDJ-2000/2 are constructed the same except for the following:

Mark	No.	Symbol and Description	CDJ-2000 /CUXJ,/SYXJ8,/FLXJ,/KXJ,/AXJ5	CDJ-2000 /UXJCB2,/SYXJ82,/FLXJ2,/KXJ2,/AXJ52	Remarks
		PCB ASSEMBLIES			
NSP		1..TFTA Assy	DWM2355	DWM2445	
	P77-2	2..SDCB Assy	DWX2980	DWX3293	*2
	P83-1	2..TFTB Assy	DWX2882	DWX3291	*1
	P83-2	2..CDCB Assy	DWX2987	DWX3292	*1
		DISPLAY SECTION			
	P83-3	LCD	DWX3126	CWX3970	
	P83-17	LCD Packing (Top)	DEC3193	DEC3376	
	P83-18	LCD Stay	DND1263	DND1267	
	P83-19	Rear Bracket	DND1264	DND1268	
	P83-20	LCD Holder	DNH2850	Not used	
	P83-21	LCD Panel	DNK5319	DNK5951	
	P83-30	Screw	BBZ30P060FTB(x 22)	BBZ30P060FTB(x 21)	
	P83-31	Screw	BSZ20P040FTB	Not used	
		Screw	Not used	BSZ30P040FTC	No. 1
		40P FFC	Not used	DDD1541	No. 2
		Fitting/LCD	Not used	DNH2992	No. 3

(2) CDJ-2000/CUXJ and CDJ-2000/UXJCB2 are constructed the same except for the following:

Mark	No.	Symbol and Description	CDJ-2000/CUXJ	CDJ-2000/UXJCB2	Remarks
		PACKING SECTION			
⚠	P75-1	Power Cable	ADG7021	ADG7022	
	P75-23	Packing Case	DHG2800	DHG3025	

(3) CDJ-2000/SYXJ8 and CDJ-2000/SYXJ82 are constructed the same except for the following:

Mark	No.	Symbol and Description	CDJ-2000/SYXJ8	CDJ-2000/SYXJ82	Remarks
		PACKING SECTION			
	P75-23	Packing Case	DHG2799	DHG3026	

(4) CDJ-2000/FLXJ and CDJ-2000/FLXJ2 are constructed the same except for the following:

Mark	No.	Symbol and Description	CDJ-2000/FLXJ	CDJ-2000/FLXJ2	Remarks
		PACKING SECTION			
	P75-23	Packing Case	DHG2801	DHG3028	

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(5) CDJ-2000/KXJ5 and CDJ-2000/KXJ52 are constructed the same except for the following:

Mark	No.	Symbol and Description	CDJ-2000/KXJ	CDJ-2000/KXJ2	Remarks
		PACKING SECTION			
	P75-23	Packing Case	DHG2804	DHG3029	

(6) CDJ-2000/AXJ5 and CDJ-2000/AXJ52 are constructed the same except for the following:

Mark	No.	Symbol and Description	CDJ-2000/AXJ5	CDJ-2000/AXJ52	Remarks
		PACKING SECTION			
	P75-23	Packing Case	DHG2803	DHG3030	

*1 Refer to “3.PCB PARTS LIST”, “5.SCHEMATIC DIAGRAM” and “6.PCB CONNECTION DIAGRAM”.

*2 Although DWX2980 and DWX3293 are different in part number, they are constructed same. Refer to “CDJ-2000/CUXJ(RRV3999)”.

Changing the constants for the parts of the MAIN and JACB Assys

With a modification of the LCD section, the constants for the parts of the MAIN and JACB Assy, have been changed for improvement of the sound quality.

Mark	No.	Description	Part No.		
MAIN Assy : DWG1660					
RESISTORS					
R	570	RS1/16SS332J	=>	RS1/16SS222J	
R	571	RS1/16SS332J	=>	RS1/16SS222J	
R	572	RS1/16SS332J	=>	RS1/16SS222J	
R	573	RS1/16SS332J	=>	RS1/16SS222J	
CAPACITORS					
C	3093	CEHVAW101M16	=>	CCH1565	
JACB Assy : DWX2988					
CAPACITORS					
C	9401	CEHAZL220M50	=>	CEHAZL101M25	
C	9404	CEHAZL220M50	=>	CEHAZL101M25	

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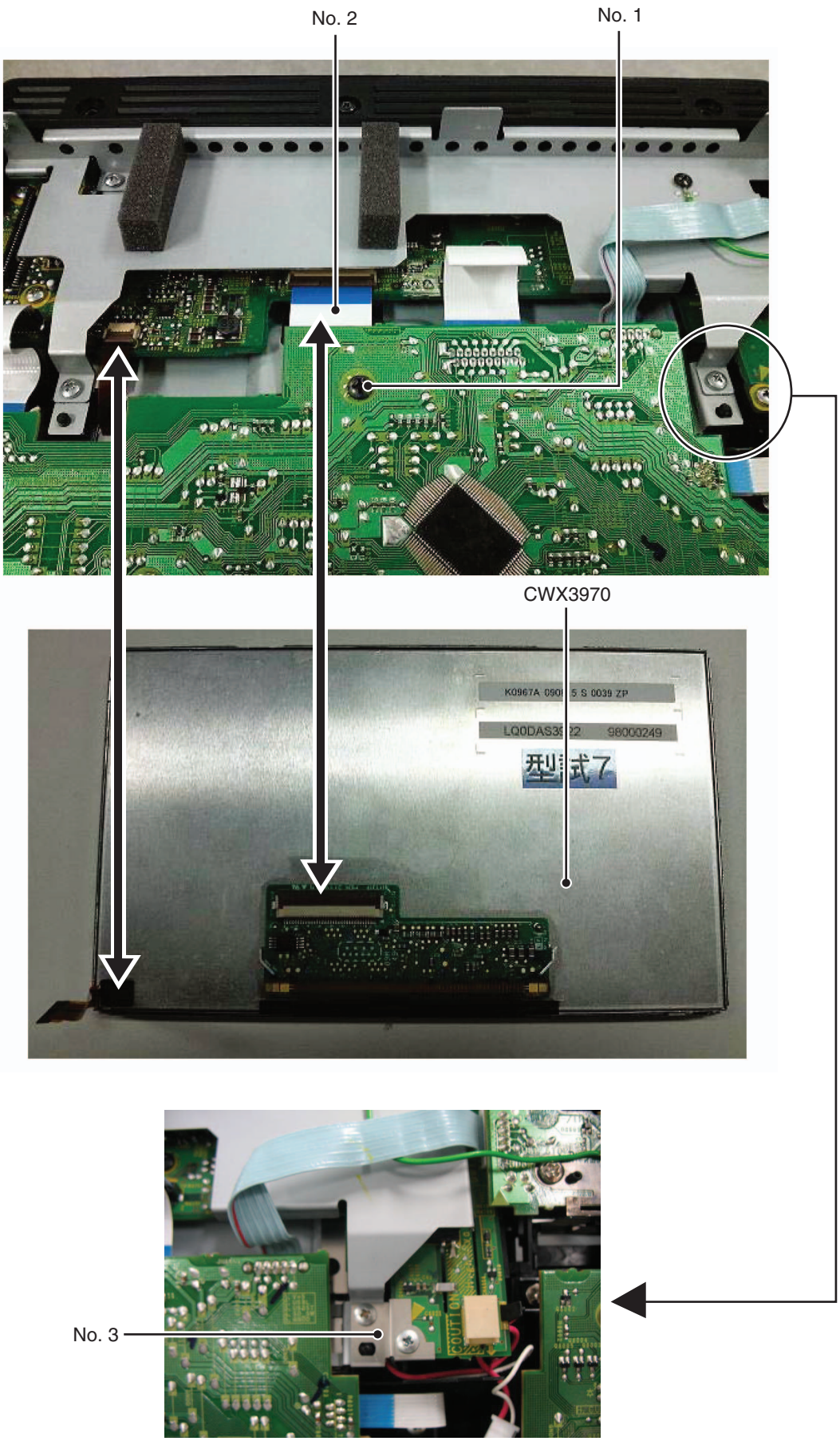

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3. PCB PARTS LIST

NOTES: ● *Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.*

● *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*

● *When ordering resistors, first convert resistance values into code form as shown in the following examples.*

Ex.1 When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47 k ohm (tolerance is shown by J = 5%, and K = 10%).

560 Ω → 56 × 10[1] → 561 ..... RD1/4PU 5 6 1 J
47 kΩ → 47 × 10[3] → 473 ..... RD1/4PU 4 7 3 J
0.5 Ω → R50 ..... RN2H R 5 0 K
1 Ω → 1R0 ..... RS1P 1 R 0 K

Ex.2 When there are 3 effective digits (such as in high precision metal film resistors).

5.62 kΩ → 562 × 10[1] → 5621 ..... RN1/4PC 5 6 2 1 F

● *Meaning of the figures and others in the parentheses in the parts list.*

Example) IC 301 is on the point (face A, 91 of x-axis, and 111 of y-axis) of the corresponding PC board.
IC 301 (A, 91, 111) IC NJM2068V

Mark	No.	Description	Part No.
		LIST OF ASSEMBLIES	
NSP	1..	TFTA ASSY	DWM2445
	2..	TFTB ASSY	DWX3291
	2..	CDCB ASSY	DWX3292
	2..	SDCB ASSY	DWX3293
		IF TFTB ASSY	
		SEMICONDUCTORS	
	IC	4001	ADSP-BF531SBSTZ400
	IC	4003	TC7WHU04FU
	IC	4004	DYW1781
	IC	4005	K4S561632J-UC75
	IC	4017,4021	TC7SH08FUS1
⚠	IC	4018	TK61222CQ6
⚠	IC	4019	BA00BC0WFP
	Q	4001	2SC4081
	Q	4002-4004,4018,4019	LTC114YUB
	Q	4030-4033	LTC114YUB
	Q	4035	RTQ045N03
	Q	4036	RSQ025P03
	D	4004-4006,4024-4026	SML-512MW(PQ)
	D	4028,4029,4034,4037	SML-512MW(PQ)
	D	4030,4031	SML312WBCWA(Z1)
	D	4035	SML312BC4T(QR)
	D	4038	SML-512MW(PQ)
	D	4039	RB160M-60
		MISCELLANEOUS	
	L	4021-4027 FERRITE BEAD	CTF1528
	L	4028 INDUCTOR	CTF1740
	L	4029-4032 FERRITE BEAD	CTF1528
	L	4033 INDUCTOR	CTF1379
	L	4034-4050 FERRITE BEAD	CTF1528
	L	4051,4052 CHIP BEEDS FILTER	BTX1042
	L	4054 CHIP BEEDS FILTER	BTX1042
	L	4056 CHOKE COIL	CTH1435
	S	4001-4004,4020-4026 TACT SWITCH	DSG1134
	S	4028 ENCODER SW	DSX1080
	X	4001 CRYSTAL RESONATOR	DSS1164
	X	4002 CRYSTAL RESONATOR	XSS3003
	CN	4002 29P CONNECTOR	VKN1433
	CN	4007 16P CONNECTOR	VKN1420
	CN	4012 18P CONNECTOR	VKN1422
	CN	4013 CONNECTOR	CKS5660
	CN	4014 CONNECTOR	CKS5561
		RESISTORS	
	R	4002,4004,4053,4054	RAB4CQ470J
	R	4022	RAB4CQ471J
	R	4024,4027	RAB4CQ101J
	R	4033	RAB4CQ104J
	R	4049,4050	RAB4CQ680J
	R	4058,4059,4093,4105	RS1/10SR181J
	R	4081-4084	RAB4CQ560J
	R	4089,4286	RS1/10SR112J
	R	4107,4109,4275-4277	RS1/10SR181J
	R	4245-4248	RAB4CQ331J
	R	4271,4272	RAB4CQ470J
	R	4282,4283	RS1/10SR122J
	R	4288,4290	RS1/10SR181J
	R	4359	RS1/16SS6202D
	R	4363,4407	RS1/16SS3303D
	R	4364	RS1/16SS6802D
	R	4381	RS1/16SS5602D
	R	4382	RS1/16SS3302D
	R	4383	RS1/10SR0R0J
	R	4392	RS1/10SR471J
		Other Resistors	RS1/16SS###J
		CAPACITORS	
	C	4001,4003,4011,4016	CCSRCH100D50
	C	4002,4024,4044-4046	CKSSYB104K16
	C	4006-4008	CKSRYB104K50
	C	4028,4214,4272	CCH1565
	C	4029	CKSRYF104Z25
	C	4165,4168-4172	CKSSYB104K16
	C	4173,4190,4200,4201	CCG1192
	C	4174-4181,4183-4189	CKSSYB104K16
	C	4191-4196,4199,4202	CKSSYB104K16
	C	4203,4256	CCG1192
	C	4204,4212,4218,4220	CKSSYB104K16
	C	4211	CEVW101M25
	C	4213,4217	CKSSYB104K10
	C	4216	CEHVAW101M6R3

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Mark	No.	Description	Part No.
	C	4222,4223,4257,4266	CKSSYB104K16
	C	4233-4235,4244-4247	CCSSCH101J50
	C	4249	CCSSCH221J50
	C	4253,4261,4264,4265	CKSRYB105K16
	C	4254	CCSSCH101J50
	C	4255	DCH1201
	C	4258,4260,4262,4263	CCG1236
	C	4267	CKSRYB474K10
	C	4268,4269,4278	CCG1236
	C	4273,4281	CKSSYB104K16
	C	4274	VCG1063
	C	4275	CCSSCH331J50
	C	4276	CKSRYB105K16

LF CDCB ASSY

SEMICONDUCTORS

	IC	5001	AD7147ACPZ500RL7

MISCELLANEOUS

	L	5001 CHIP SOLID INDUCTOR	XTL3010
	L	5002-5006 INDUCTOR	CTF1639
	CN	5001 7P CONNECTOR	VKN1411

RESISTORS

		All Resistors	RS1/16SS###J

CAPACITORS

	C	5001	CKSQYB103K50
	C	5002	CKSRYB104K16
	C	5003	CCG1192
	C	5004-5008	CCSRCH101J50

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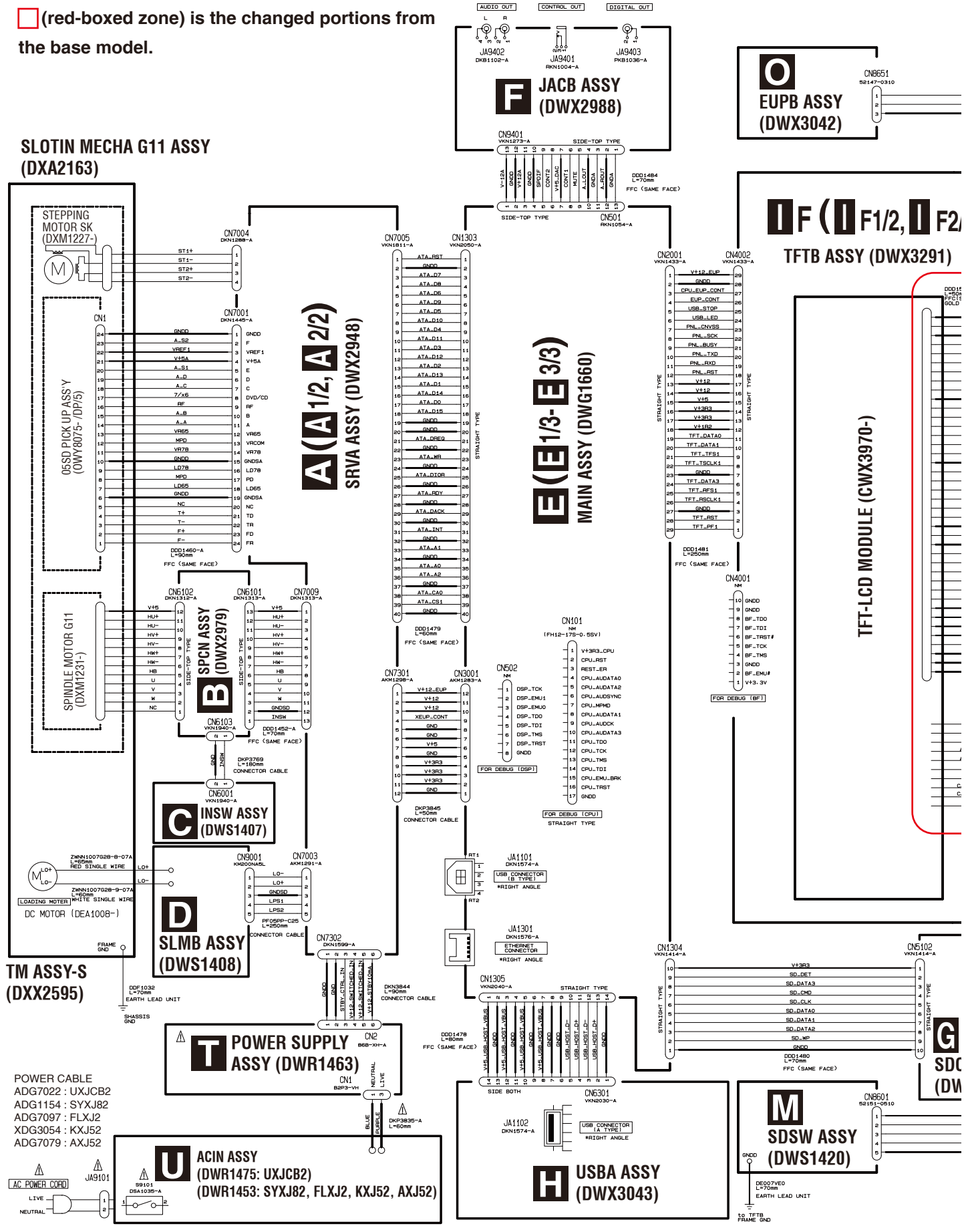
4. BLOCK DIAGRAM

4.1 OVERALL WIRING DIAGRAM

(red-boxed zone) is the changed portions from the base model.



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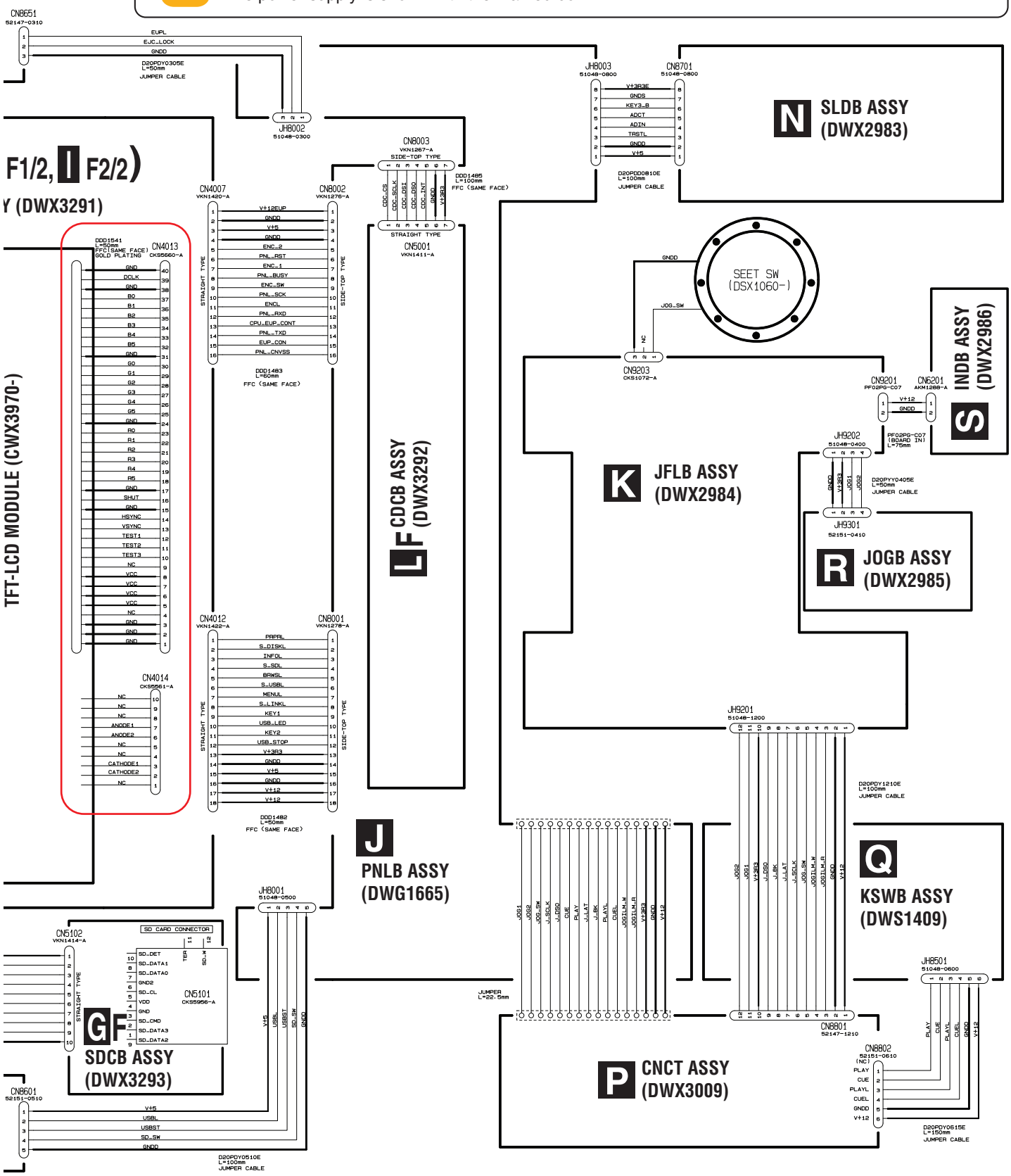
- When ordering service parts, be sure to refer to "EXPLODED VIEWS and PARTS LIST" or "PCB PARTS LIST".
- The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
- ⬭ : The power supply is shown with the marked box.



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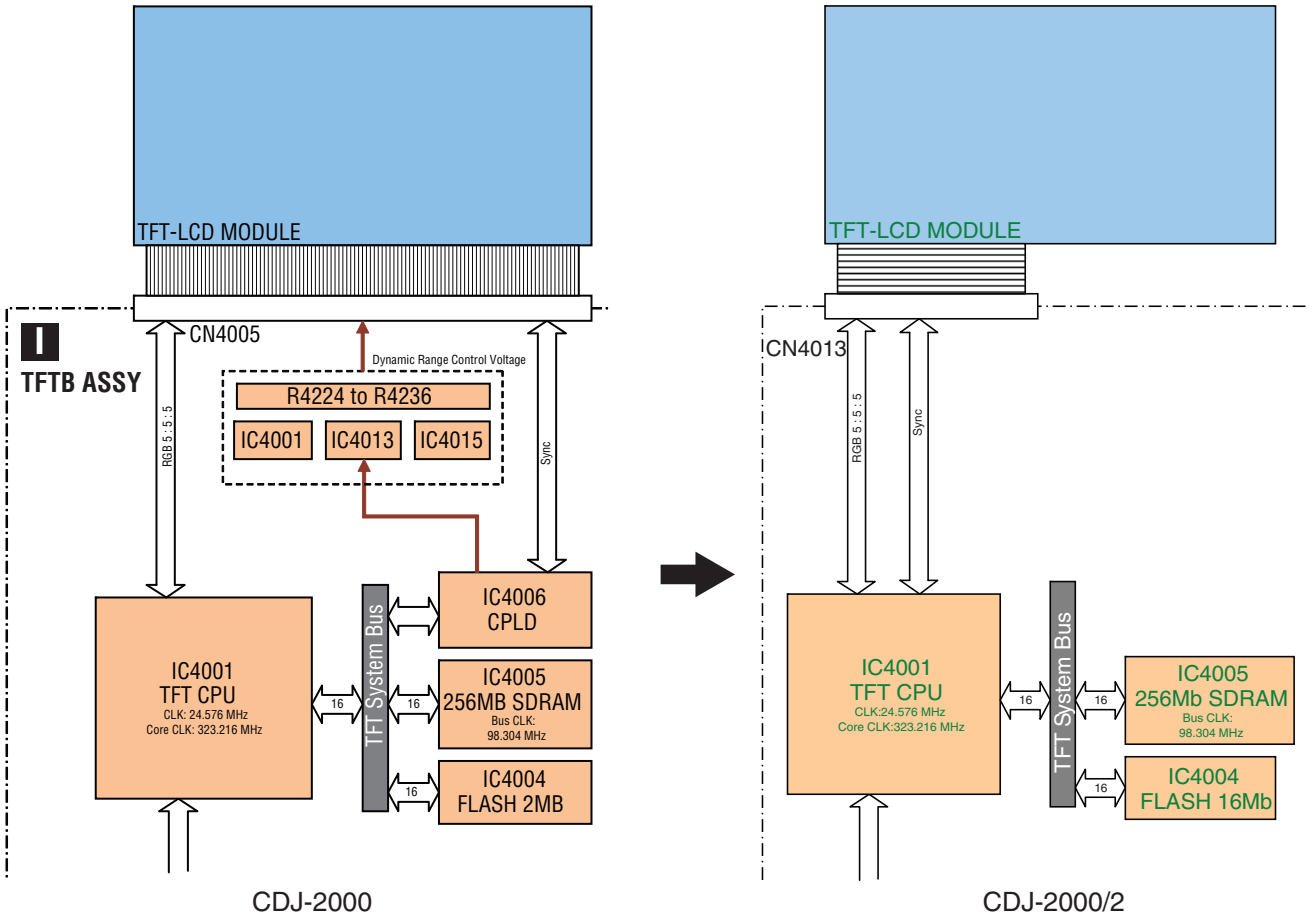
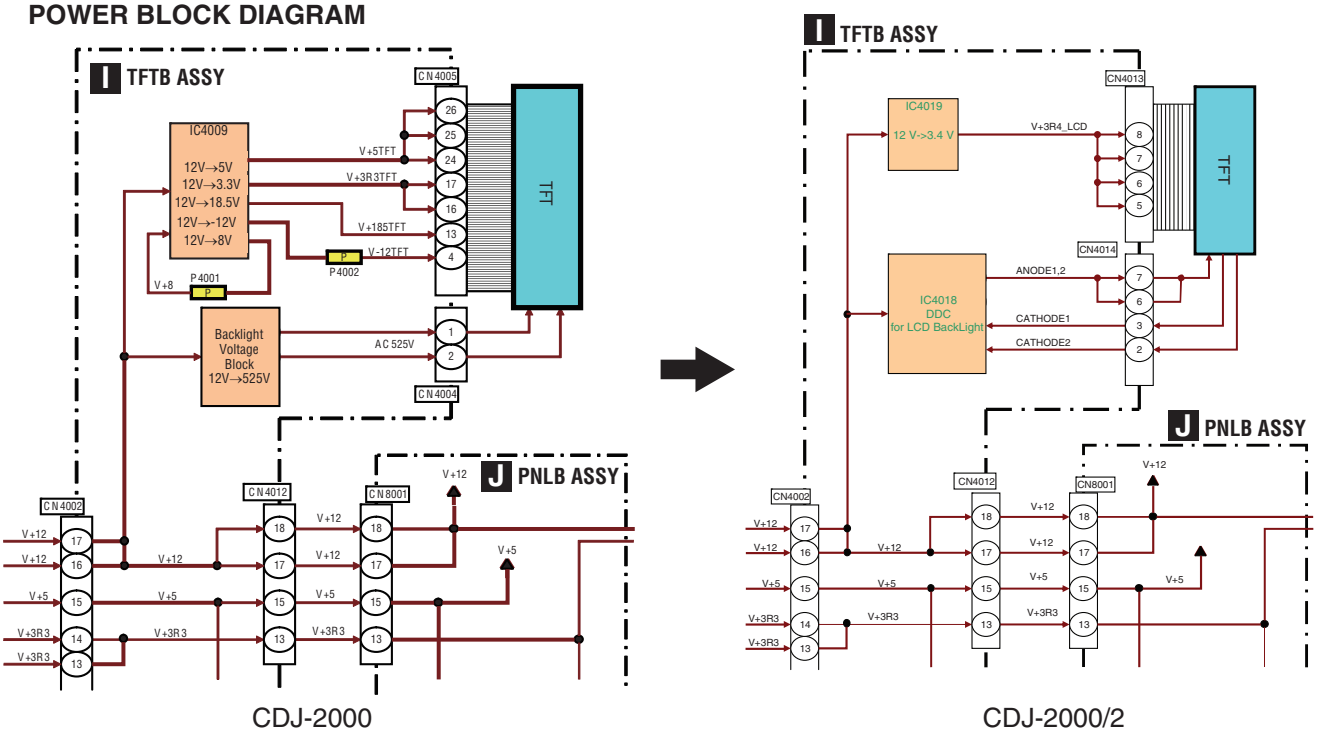
4.2 SIGNAL BLOCK DIAGRAM AND POWER BLOCK DIAGRAM

The changed portions from the base model are as follows.

SIGNAL BLOCK DIAGRAM



POWER BLOCK DIAGRAM



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A

B

C

D

E

F

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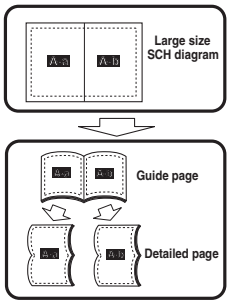
5. SCHEMATIC DIAGRAM
5.1 TFTB ASSY (1/2)



F-a 1/2

F 1/2 TFTB ASSY (DWX3291)

IC4001
ADSP-BF531SBSTZ400
TFT CPU

F 2/2 RESET

F 2/2

F 1/2

OSC CIRCUIT

CLOCK 9MHz OSC

to TFT-LCD Module

BFSH_BUS from CONNECTOR to MAIN

J-TAG

256Mb SDRA

98MHz

9MHz

16Mb

*CAPACITORS
Indicated in Capacity/Voltage(V) unless otherwise noted. u: µF, p: pF

*RESISTORS
Indicated in Ω, ± 5% tolerance unless otherwise noted. k: kΩ, M: MΩ

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Therefore, when replacing, be sure to use parts of identical designation.

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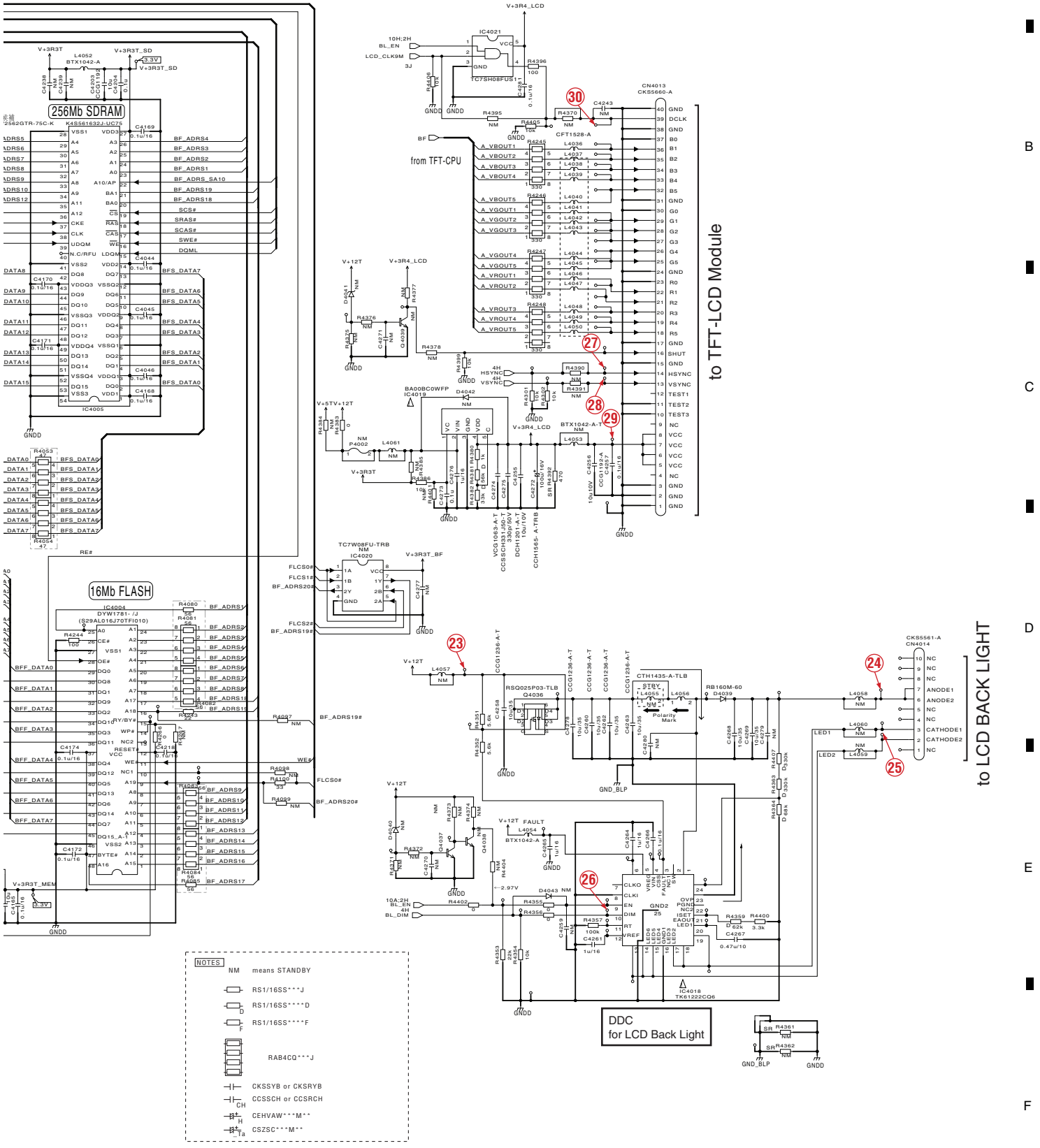

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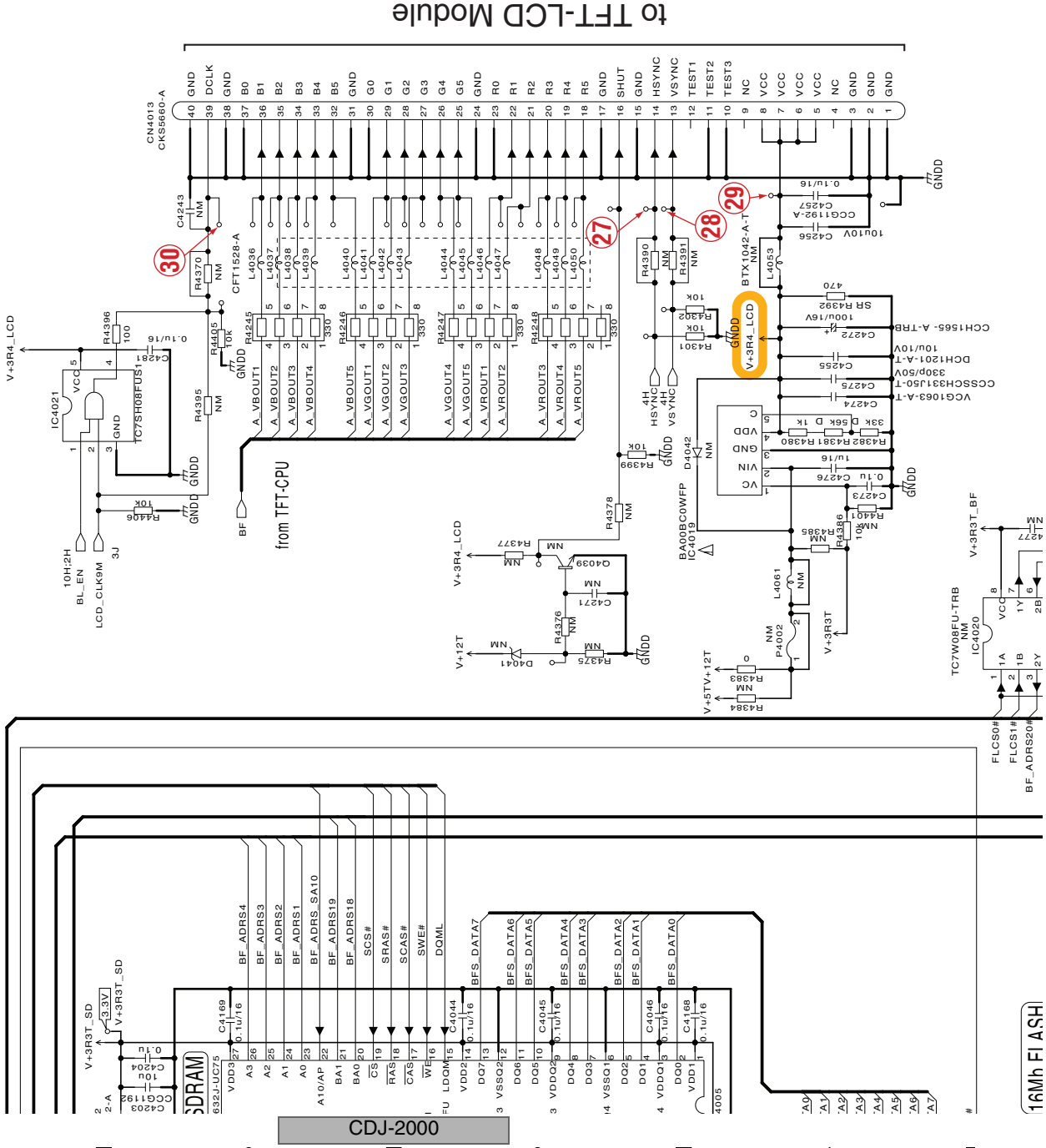
F 1/2 TFTB ASSY (DWX3291)



IF-a IF-b

IF-b 1/2

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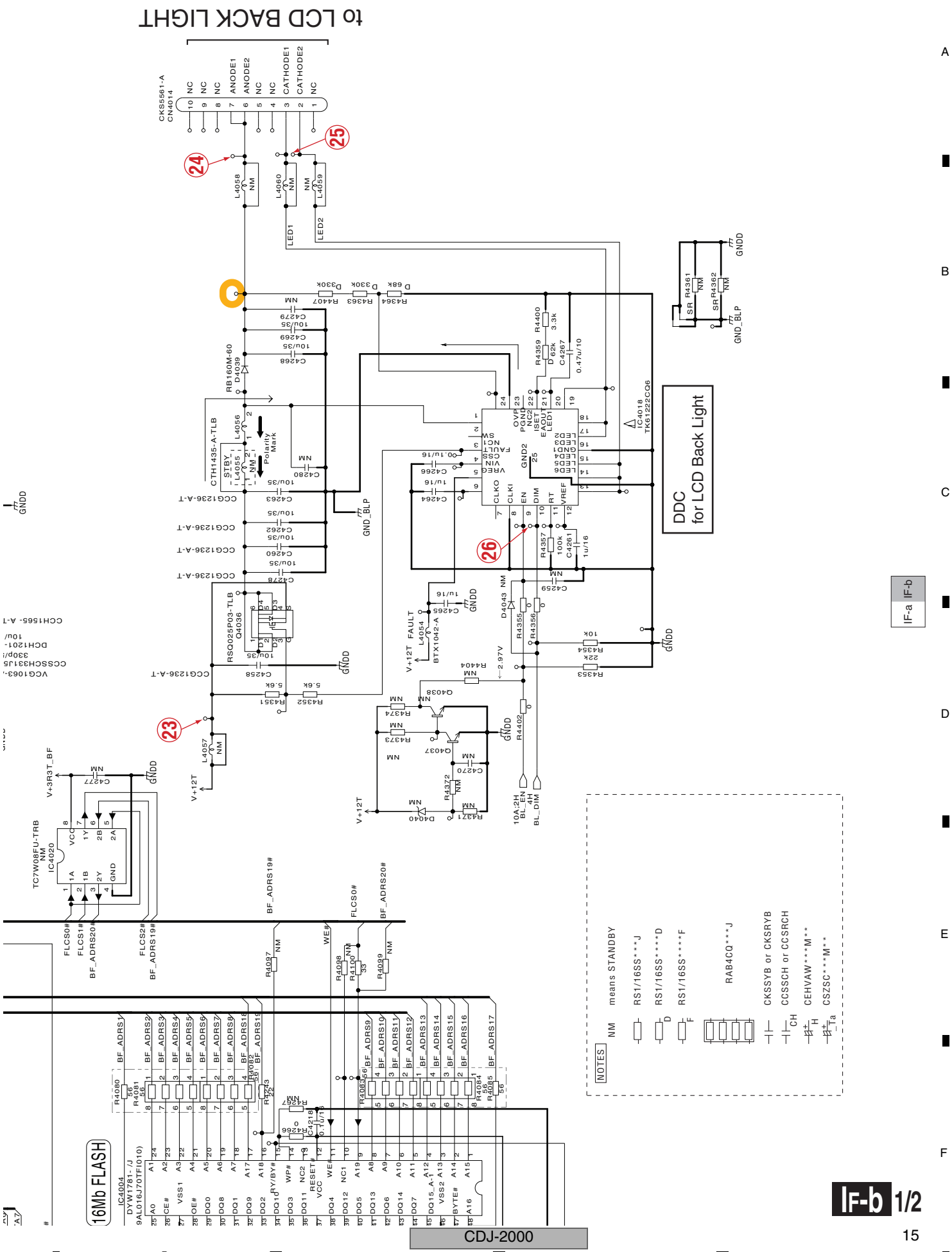

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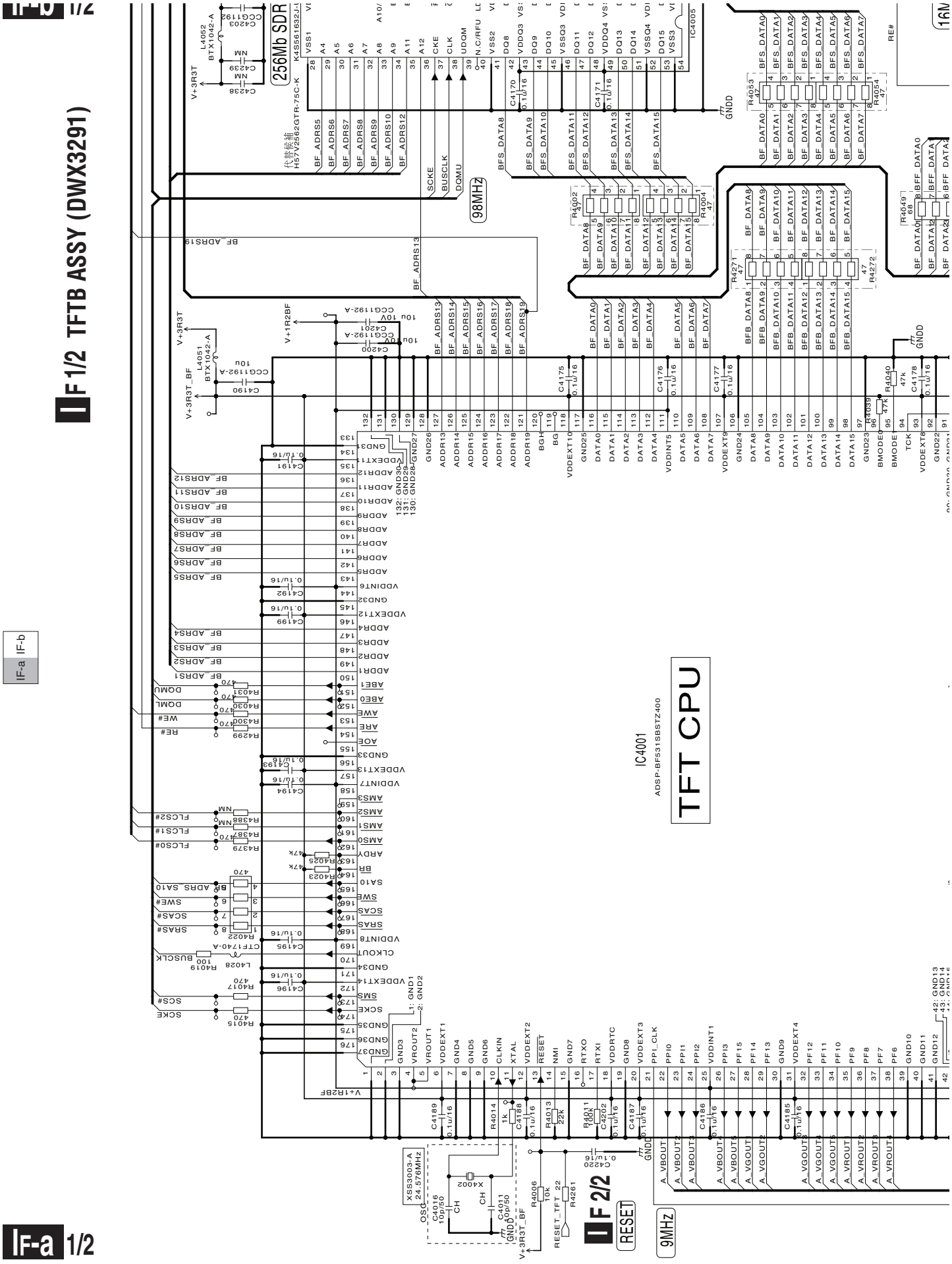
IF 1/2 TFTB ASSY (DWX3291)



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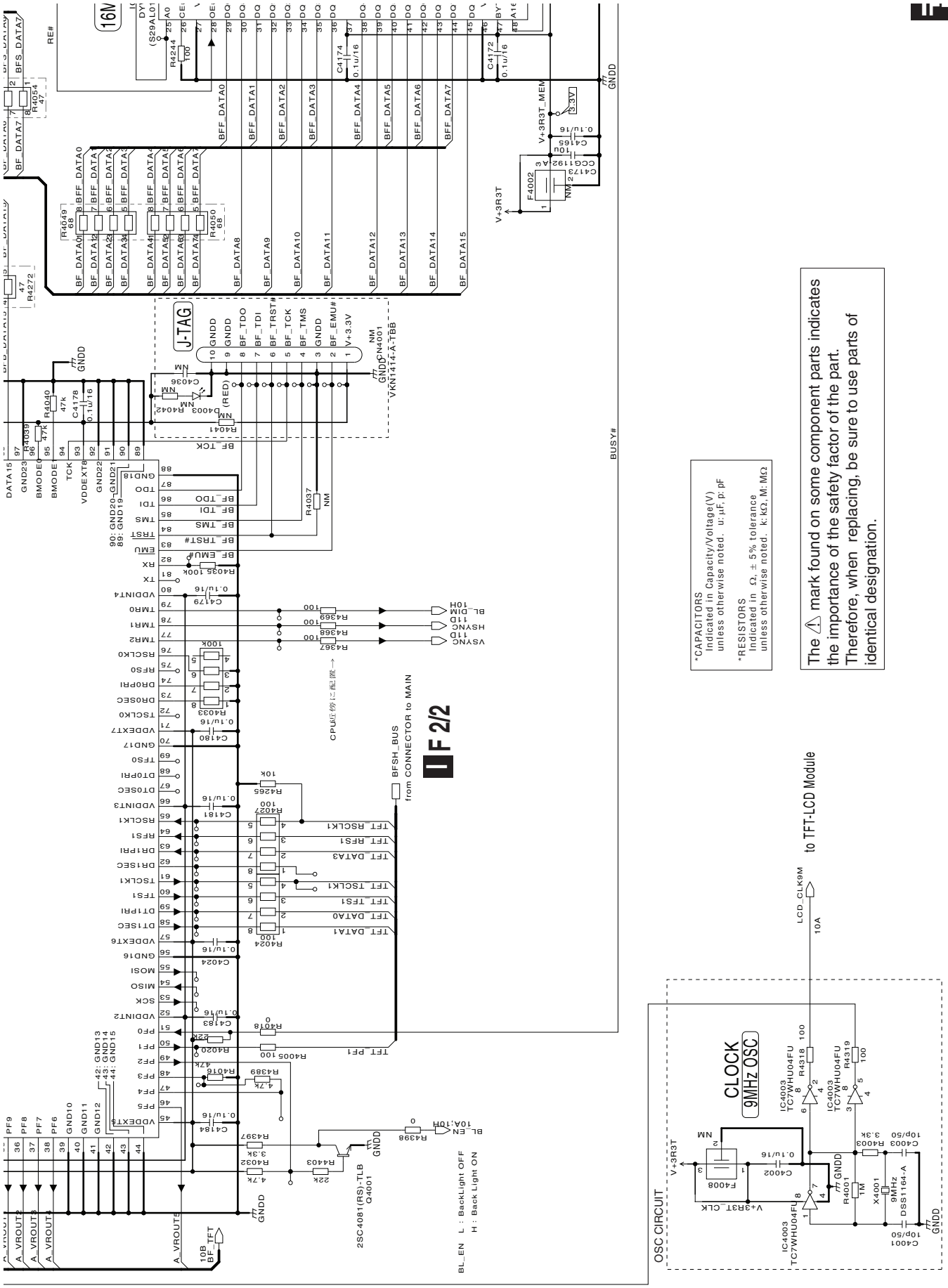

*CAPACITORS
Indicated in Capacity/Voltage(V)
unless otherwise noted. u: μF, p: pF

*RESISTORS
Indicated in Ω, ± 5% tolerance
unless otherwise noted. k: kΩ, M: MΩ

The ⚠ mark found on some component parts indicates the importance of the safety factor of the part.
Therefore, when replacing, be sure to use parts of identical designation.

IF-a IF-b

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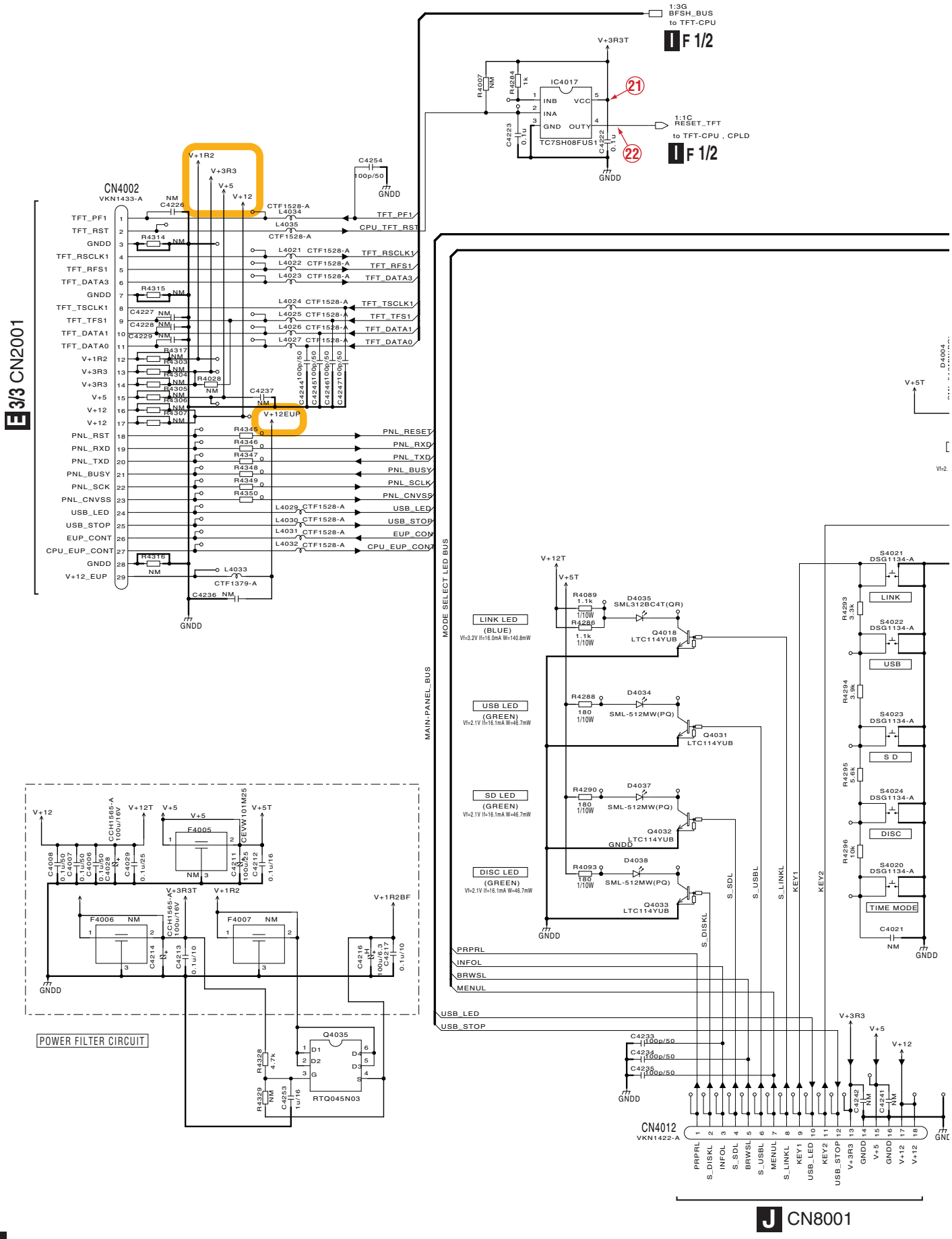
5.2 TFTB ASSY (2/2)



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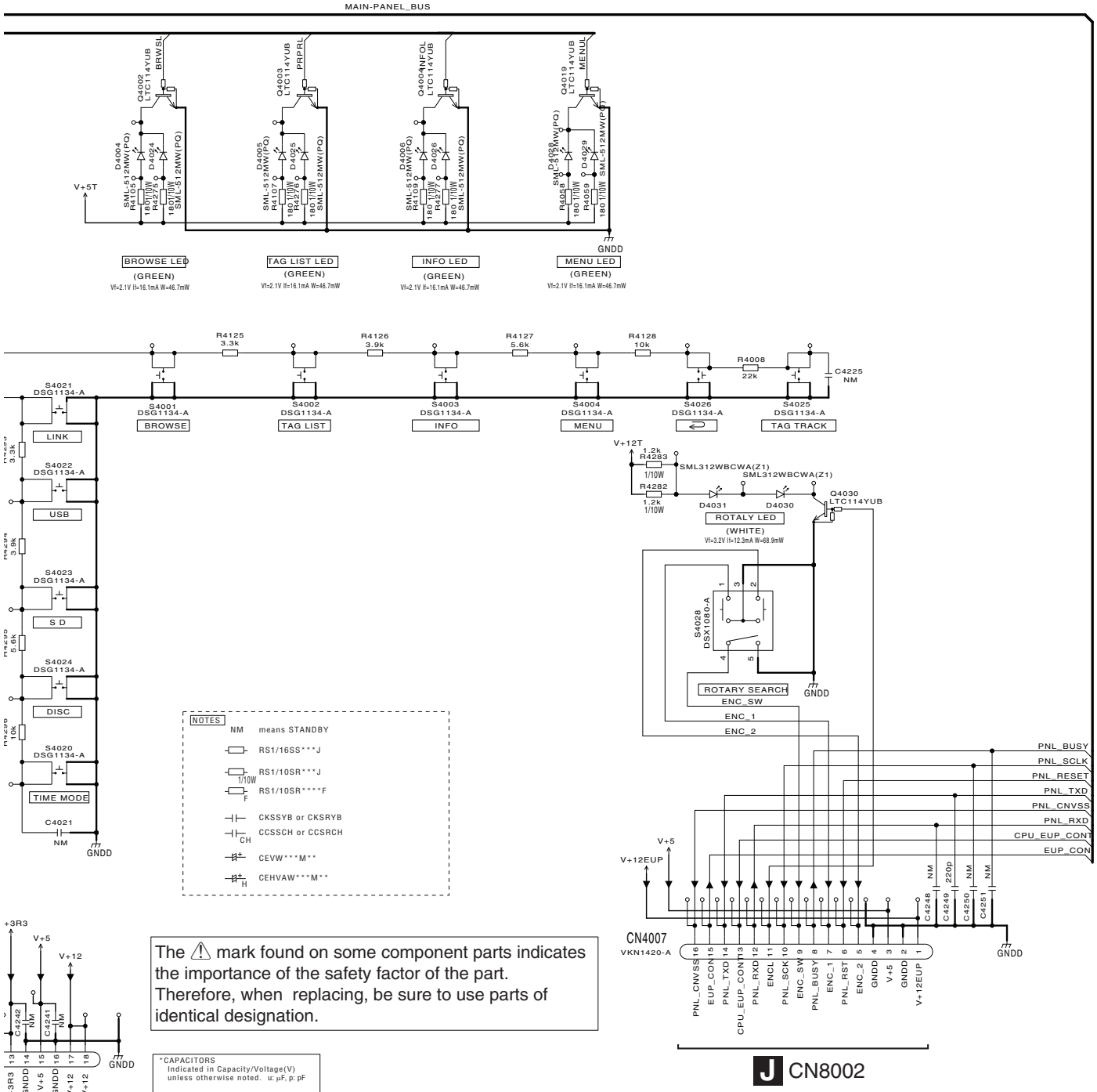

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*RESISTORS
Indicated in Ω, ± 5% tolerance unless otherwise noted. k: kΩ, M: MΩ

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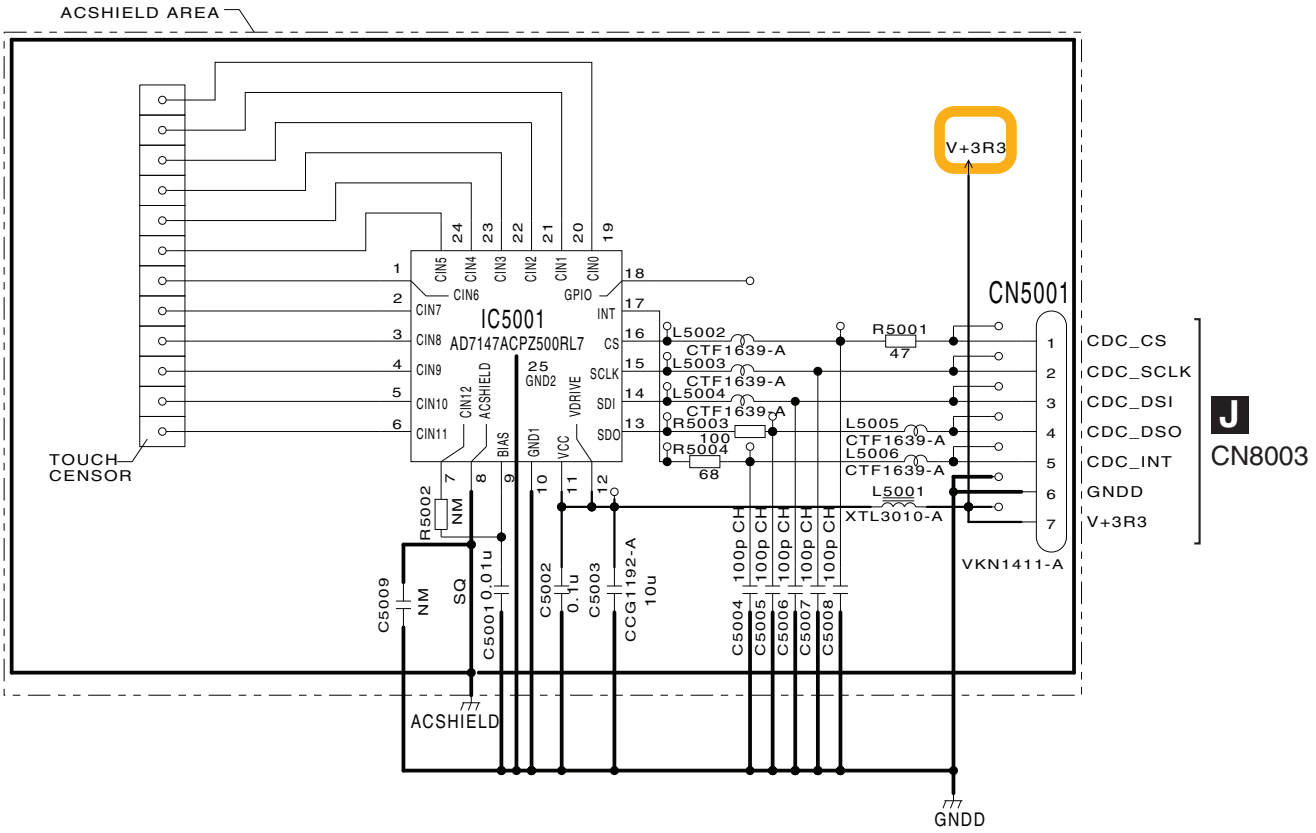
5.3 CDCB ASSY

LF CDCB ASSY (DWX3292)



NOTES

NM means STANDBY

RS1/16SS***J

CKSRYB

CKSQYB

SQ CCSSCH

CH

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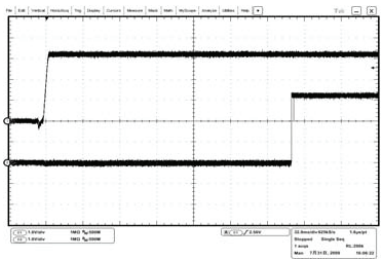
5.4 WAVEFORMS

TFTB ASSY
MODE: PLAY

(21) IC4017-5pin(V+3R3T)
V:1.0 V/div. H:32.0 ms/div.

(22) IC4017-4pin(RESET_TFT)
V:1.0 V/div. H:32.0 ms/div.

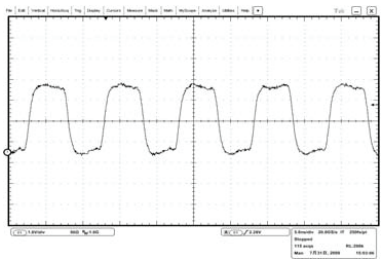
(21)
(22)



TFTB ASSY
MODE: PLAY

(29) IC4005-37P(BUSCLK)
V:1.0 V/div. H:5.0 ns/div.

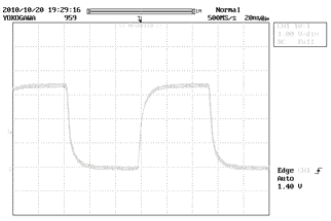
(29)



TFTB ASSY
MODE: PLAY

(30) CN4013-39P(DCLK)
V:1.0 V/div. H:20 ns/div.

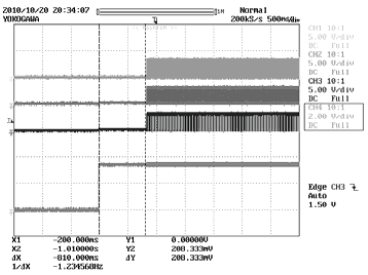
(30)



TFTB ASSY
MODE: PLAY

(30) CN4013-39P(DCLK)
V:5.0 V/div. H:500 ms/div.
(27) CN4013-14P(HSYNC)
V:5.0 V/div. H:500 ms/div.
(28) CN4013-13P(VSYNC)
V:5.0 V/div. H:500 ms/div.
(29) CN4013-5,6,7,8P(V+3R4_LCD)
V:2.0 V/div. H:500 ms/div.

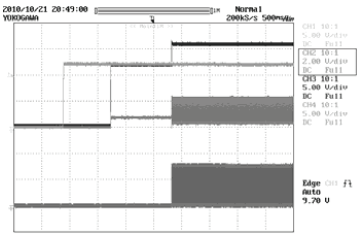
(30)
(27)
(28)
(29)



TFTB ASSY
MODE: LCD BLIGHTNESS 1

(23) Q4036-4P(V+12T)
V:5.0 V/div. H:500 ms/div.
(24) CN4014-6,7P(ANODE1,2)
V:5.0 V/div. H:500 ms/div.
(25) CN4014-2,3P(CATHODE1,2)
V:5.0 V/div. H:500 ms/div.
(26) IC4018-10P(BL_DIM)
V:1.0 V/div. H:500 ms/div.

(24)
(23)
(25)
(26)



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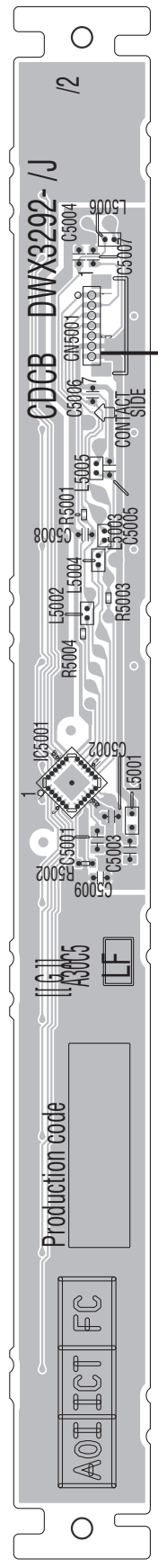
6. PCB CONNECTION DIAGRAM
6.1 SDCB and CDCB ASSYS

SIDE A

LF CDCB ASSY

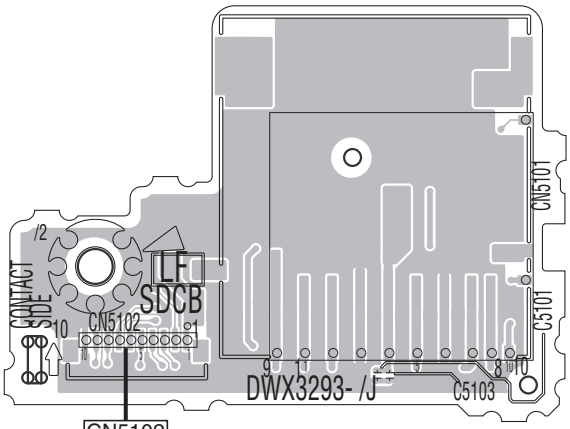


J CN8003

CN5001

(DNP2650-B)

GF SDCB ASSY



CN5102

E CN1304

(DNP2650-B)

GF LF

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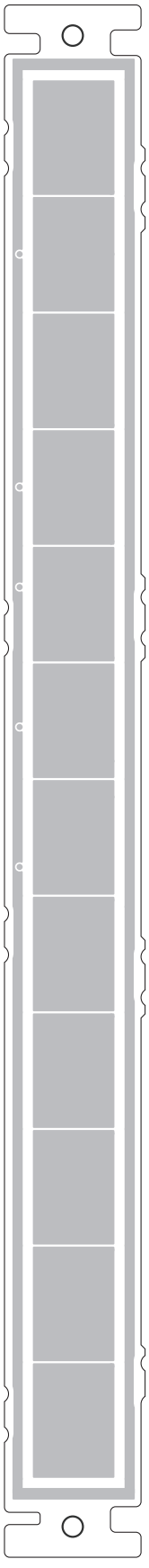
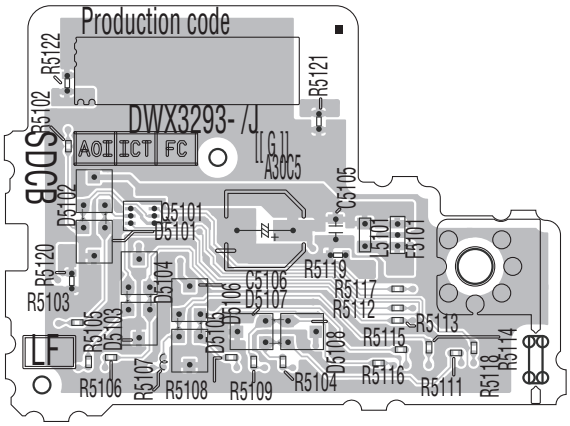
LF CDCB ASSY



(DNP2650-B)

GF SDCB ASSY



(DNP2650-B)

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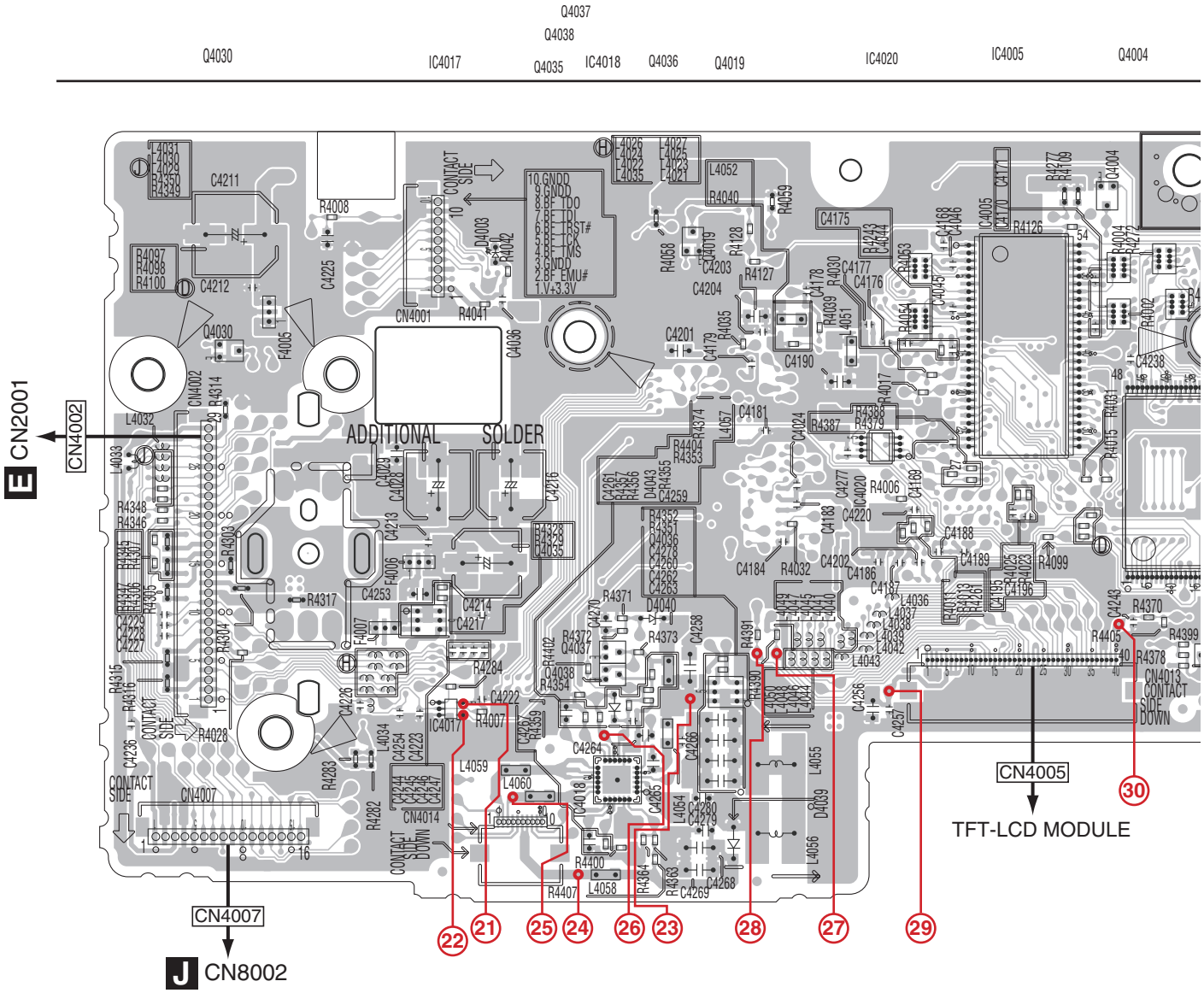
6.2 TFTB ASSY

SIDE A

IF TFTB ASSY



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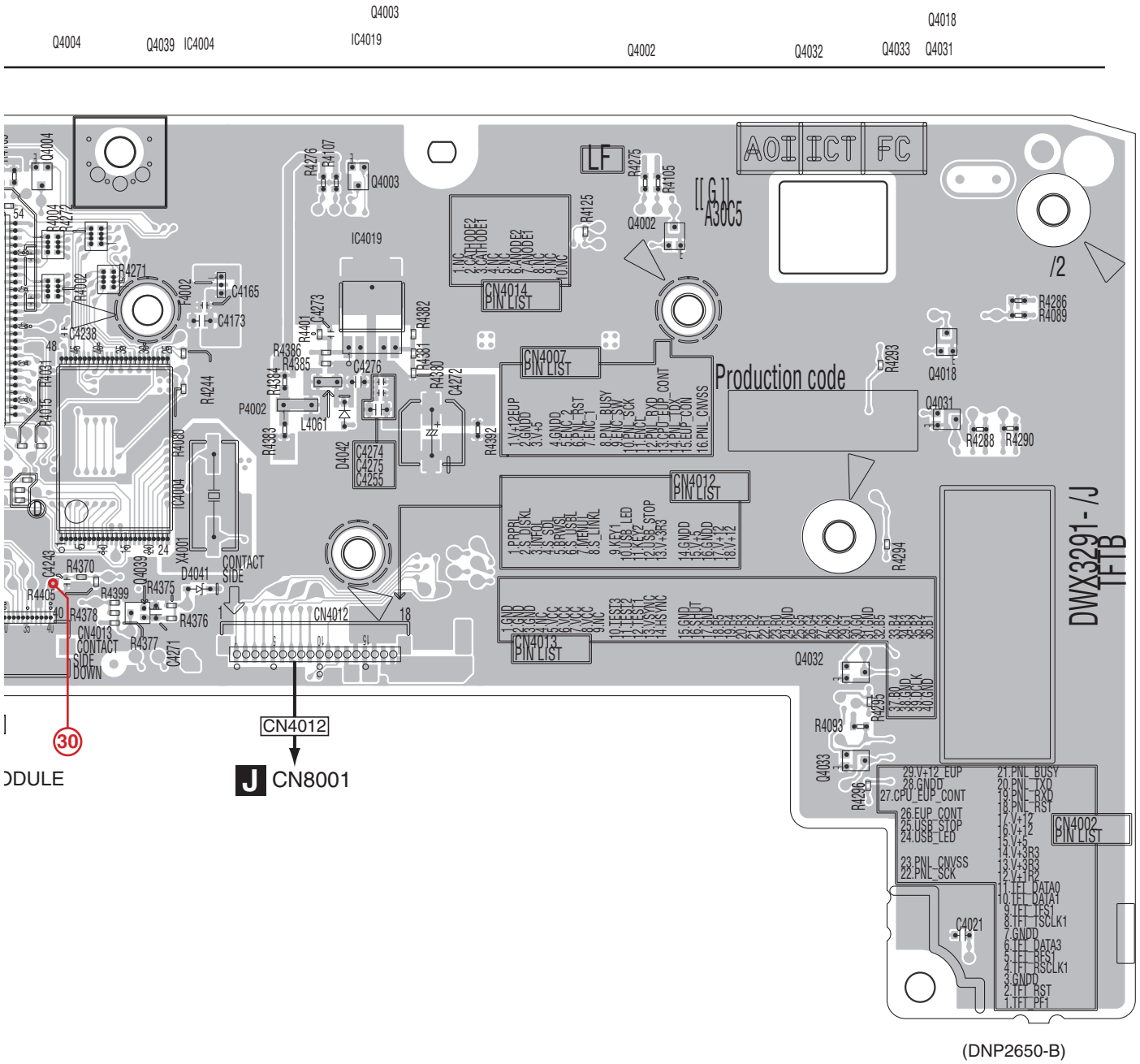
SIDE A

NOTE: The encircled numbers denote measuring point.



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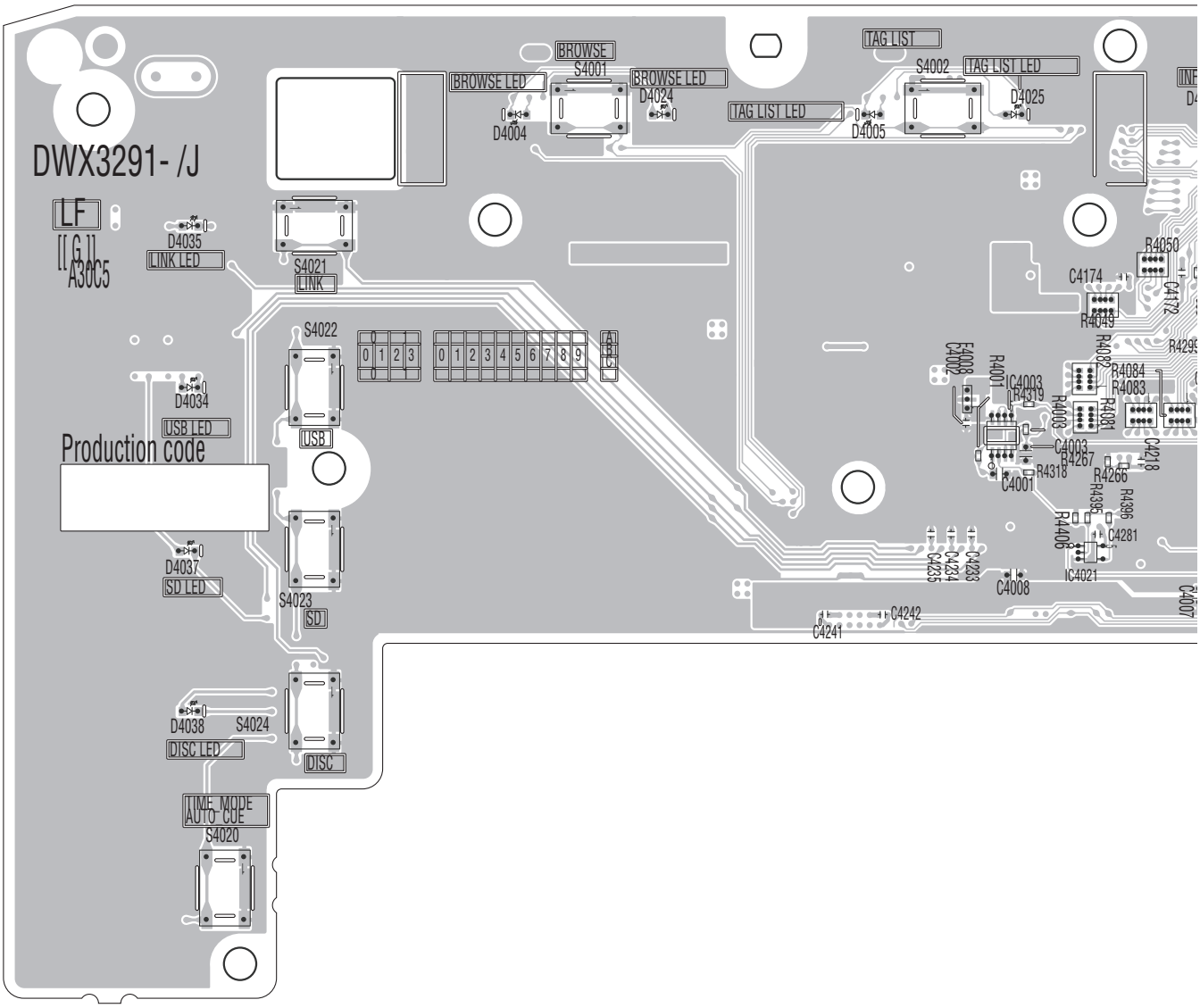
SIDE B

IF TFTB ASSY



(DNP2650-B)

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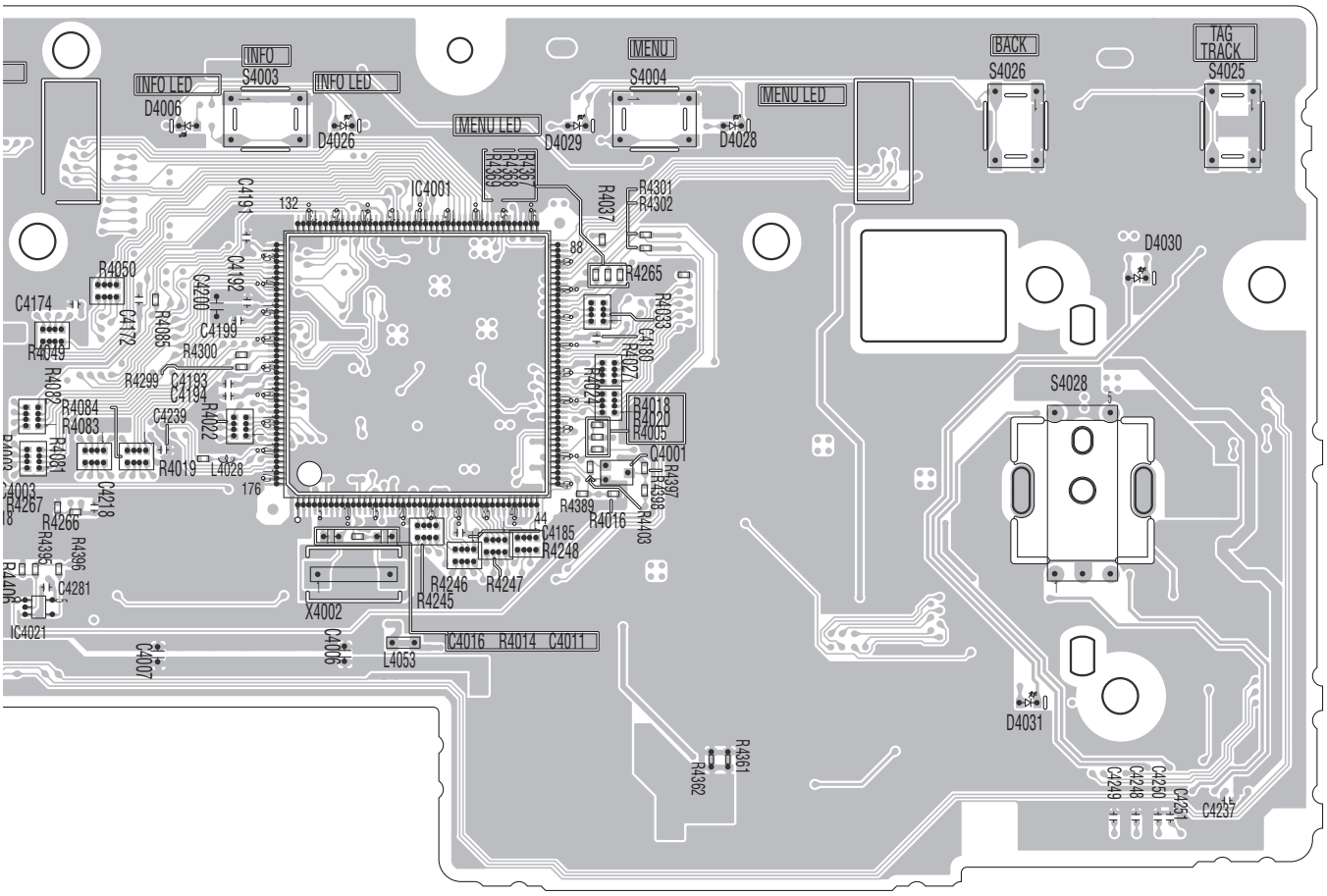
SIDE B

IC4021 IC4001 Q4001



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7. ERROR CODE

■Newly Added Error Code

Error Code	Display word	Contents	Note
E-8302	PLAYER ERROR (XXXX)	Abnormalities occurred during playback.	

Newly added detailed information

[Detailed information on E-8302, newly added error code]

E-8302: PLAYER ERROR (x x x x)
E1 E2 E3 E4

E1: Data on the track in which an error was generated
First 1 bit 0: Local; 1: Via the link
Remaining 3 bits 0: CDDA; 1: CD-ROM, DVD-ROM; 2: Memory card; 3: USB storage; 4: PC; 5: MIXER

E2: Processing status when an error was generated
Four-bit code to identify in which process of the program the error was generated
When a CDDA is played
1 In the process of normal filling in the forward direction
2 In the process of normal filling in the reverse direction
3 In the process of prereading wave data
Note: Currently, although prereading of wave data can be interrupted by an error, playback itself will not be interrupted by the error. Therefore, an E-8302 error will not be generated, and this code will not be displayed.
4 In the process of filling for forward scanning
5 In the process of filling for reverse scanning
0 In other process
When a file is played
1 In the process of normal filling in the forward direction
2 In the process of normal filling in the reverse direction
3 In the process of prereading wave data
Note: Currently, although prereading of wave data can be interrupted by an error, playback itself will not be interrupted by the error. Therefore, an E-8302 error will not be generated, and this code will not be displayed.
4 In the process of filling for forward scanning
5 In the process of filling for reverse scanning
6 When a file is opened
7 When file data are obtained
0 In other process

E3 and E4: Detailed description of the error code
First 1 bit Additional track data 0: Uncompressed data; 1: Compressed data
Remaining 7 bits Detailed description of the error code
01–0F: DSP system error
02 Timeout of a file/track change command to the DSP
03 Timeout of a filling command to the DSP
04 Timeout of an audio data transmission command to the DSP
05 Filling command error
A filling command failed, because the deleted data amount from the buffer was smaller than the requested amount of a buffer-data deletion command.
06 Filling command error
A filling continuation command cannot be executed, because the previous filling process was interrupted.
07 Filling command error
An unknown error code was received.
08 A filling command was interrupted.
(An interruption request and CUE search)

10–2F: Reading system error
When a CDDA is played Note: These error codes will be displayed after all retry and recovery attempts failed.
11 Interpolation of a destroyed subcode failed.
12 The address of the retrieved data was different from the requested one.
13 An error was returned from the drive module (ATAPI).
When a file is played
10 - 19 File system error
11 File open error
14 File read error
15 File write error

30–37: DB system error
38–7F: Other errors
70 Unexpected error in the process of OS function execution

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